ATTACHMENT 4: FIELD LOGS

This attachment contains the groundwater sample collection field logs for the relatively shallow standpipe monitoring wells (MW-1, MW-5 through MW-10, MW-13, MW-15, and MW-16), as well as the field data sheets for the Westbay™ multiport wells (MW-3, MW-4, MW-11, MW-12, MW-14, and MW-17 through MW-25). Groundwater sample collection was conducted by Geofon Incorporated.

1

GROUNDWATER COLLECTION AND SAMPLE LOG WELL ID #_____5



Project Nan	ne:	Qua	rterly Monit	oring at	JPL, Pasad	ena, CA.				22622 Caldan Carinas D. Cait	- 070
Project No:		<u>4-73</u>	803						•	22632 Golden Springs Dr., Suite Diamond Bar, CA 9	9 270 91765
Navy Contra	act No.:		BATTEL	LE -	JPL #	G486048				Telephone: (909) 396- Fax: (909) 396-	7662
Sampled By	/ :	Marc	o Mendoza,				_			1 ax. (303) 330-	1400
Date:			114/05			····	.				
Weather:		parti	y cloudy and	cool			_				
	Vocul		LCULATIO		g volume):	and the property of the last o	i depletation	episte er	adharjajada Sastanas		
(140_			3.78	X	4 ²)	K3	X 0.04	108 =	208.	02 Gallons	A MALACAL CALLED
TD (fee	· crucum		/L (feet)	D	(inches)	# Vols			Calculated	Purge Volume	Mala for all languages as
PURGE	METH	מכ							PUMP	intake setting	i de la composición dela composición de la composición de la composición de la composición dela composición de la composición de la composición dela composición dela composición de la composición de la composición dela
☐ Bailer – 1	Гуре:			X Pump :	– Type: <u>2" Grun</u>	dfos			Denth	in feet (BTOC):	
		FTED	MEASURE								_
	Dept		Total	new.			Dissolved	I	ur energiak I	ing stage the second of the se	1000
Time	Wa	ter	Discharge	ρH	Conductivity	Turbidity	Oxygen	Temp	ORP	Comments	
748	(Fe てて	28 78	(Gallons)	5.38	(mS/cm)	(NTU)	(mg/L) フ. ス	(°C)	(mV) 172		
803			41.6	5.75	34.7	4.80	9.1	15.7	134		
818			83.	6.19	34.3	3.25	8.4	15.9	104		
833			125	6.42	34.3	3.18	9.3	15.9	99		
848	33.	<u> </u>	166	6.59	33.5 33.4	3.11	8,4	15.7	98 97		
963	53.	(8	208	6- 10	57.4	2.92	४.न	16.1	7+		
Total Purge	e Volum	ne:	208	(Gallor	ns)						
Total Discl	harge:		3.00	(Casing	Volumes)						
Approx. Pu	urge Ra	ate:	2.75	_(GPM)							
OBSERV	ATION	IS DU	RING PUMP	ING	The second						
NOTES: (we	ell condi	ition c	olor clarity	odor). P	urge start at:	7 <i>UL</i> 0	ourge time s	.to-t: -	748		
	00.10.		olor, clarity,	odol). <u>I</u>	uige stait at.	_/ <u>-1-3</u>	urge une s	start. /	7.8		-
RECHARGE	BEHA	VIOR:	X	Fast rec	harging		····				-
		Medicina and the state of		Slow red	charging (80%	recharge did	not occur a	after two	hours)		
WATER	DISPO	SAL		de la constant	Market 1					k divisió fere ir stolenist.	
urge water st	torage:		polytank							中心。如何可以可以可以可以可以可以可以可以可以可以可以可以可以可以可以可以可以可以可以	www.ww.
urge water di											
WELL SA	MPLI	iG	grift Hillians Harrist Harris			Market St.					
ample Depth	in feet ((BTOC)):								(Alexandra)
Driginal				MS/MSD		<u>B</u>	lank			Other (Trip / Source /)	
ample ID:		MW	<u>-5</u> s	ample ID	DUPE-5	-1005 T	ype:			Type:	
ample Time:				ample Ti	me:		ample ID:				
lo. of Contain	ers:	5	N	o. of Con	tainers:	<u> </u>	ample Time:			Sample Time:	_
			•			N	o. of Contain			No. of Containers:	_
			•		OI	RIGINAL FIELI					

GROUNDWATER COLLECTION AND SAMPLE LOG WELL ID # 6



Project Name: Quarterly Monitoring at JPL, Pasadena, CA. 22632 Golden Springs Dr., Suite 270 Project No: 4-73803 Diamond Bar, CA 91765 Telephone: (909) 396-7662 Navy Contract No.: BATTELLE - JOL #6486048 Fax: (909) 396-1455 Marco Mendoza, Jason Estep Sampled By: 2/16/05 Date: Weather: partly cloudy and cool PURGE VOLUME CALCULATION (casing volume): Gallons TD (feet) D (inches) WL (feet) Calculated Purge Volume PURGE METHOD PUMP INTAKE SETTING ☐ Bailer – Type: __ X Pump – Type: 2" Grundfos Depth in feet (BTOC): FIELD PARAMETER MEASUREMENT Depth to Total Dissolved Time Water Discharge Conductivity Turbidity Oxygen ORP Temp Comments (Feet) (Gallons) (mS/cm) (NTU) (mg/L) (° C) (mV) 914 154.12 0 6.99 32.4 -161 19.6 7.9 218 937 36 7.23 8.99 8.3 160 19.5 210 1001 71 7.21 .160 264 8.3 20.0 218 7.34 1024 1,83 8.3 107 .160 20.2 220 1048 142 7.39 .159 1.93 8.5 20.5 216 1111 154.12 7.43 .159 2.38 8.6 20.9 د 23 Total Purge Volume: (Gallons) Total Discharge: 3.02 (Casing Volumes) Approx. Purge Rate: 1.5 (GPM) OBSERVATIONS DURING PUMPING NOTES: (well condition, color, clarity, odor): Purge start at: 9/2 Purge time start: 9/4 RECHARGE BEHAVIOR: X Fast recharging □ Slow recharging (80% recharge did not occur after two hours) WATER DISPOSAL Purge water storage: polytank Purge water disposal: WELL SAMPLING Sample Depth in feet (BTOC): _____ **Original** MS/MSD <u>Blank</u> Other (Trip / Source /) Sample ID: MW- 6 Sample ID: _ _____ Type: ___ Sample Time: _____///4 Sample ID: ___ Sample Time: ___ Sample ID: No. of Containers: _____5 No. of Containers: ____ __ Sample Time: ____ Sample Time:

ORIGINAL FIELD RECORD

No. of Containers: _____ No. of Containers: _____

GROUNDWATER COLLECTION AND SAMPLE LOG WELL ID # 7



Project Name: Quarterly Monitoring at JPL, Pasadena, CA. 22632 Golden Springs Dr., Suite 270 4-73803 Project No: Diamond Bar, CA 91765 Telephone: (909) 396-7662 Navy Contract No.: ___ BATTELLE - JPL 6486048 Fax: (909) 396-1455 Sampled By: Marco Mendoza, Jason Estep 2/15/05 Date: Weather: partly cloudy and cool PURGE VOLUME CALCULATION (casing volume): X 0.0408 = Gallons D (inches) TD (feet) Calculated Purge Volume PURGE METHOD. PUMP INTAKE SETTING Bailer – Type: _____ X Pump – Type: 2" Grundfos Depth in feet (BTOC): FIELD PARAMETER MEASUREMENT Depth to Total Dissolved Time Water Discharge Conductivity Turbidity ORP Oxygen Temp Comments (Feet) (Gallons) (mS/cm) (NTU) (mg/L) (° C) (mV) 808 176.36 0 5.61 509 .093 7.3 17.8 253 H.O BROWNISH 828 6.36 39 ,094 32.6 7.5 18.3 210 847 6.50 77 . 095 17.8 7.4 201 18.7 907 6.89 116 15.6 095 7.6 19.2 199 926 154 6.94 095 13.7 19.0 196 7.6 946 7.18 176.36 193 . 095 12.5 6.6 19.3 198 Total Purge Volume: (Gallons) 193 **Total Discharge:** <u>ろ, 0○</u> (Casing Volumes) \mathcal{A} Approx. Purge Rate: (GPM) OBSERVATIONS DURING PUMPING NOTES: (well condition, color, clarity, odor): Purge start at ダウウ Purge time start: ついい **RECHARGE BEHAVIOR:** X Fast recharging □ Slow recharging (80% recharge did not occur after two hours) **WATER DISPOSAL** Purge water storage: polytank Purge water disposal: WELL SAMPLING Sample Depth in feet (BTOC): _____ Original MS/MSD Blank Other (Trip / Source /) Sample ID: _ MW- 7 Sample ID: Type: Type: 946 Sample Time: Sample Time: _ Sample ID: Sample ID: No. of Containers: 5 + 1 (8321a) No. of Containers: ___ Sample Time: Sample Time: _____ No. of Containers: _____ No. of Containers: ____

GROUNDWATER COLLECTION AND SAMPLE LOG WELL ID # 8



Project Name: Quarterly Monitoring at JPL, Pasadena, CA, 22632 Golden Springs Dr., Suite 270 4-73803 Project No: Diamond Bar, CA 91765 Telephone: (909) 396-7662 #G486048 Navy Contract No.: BATTELLE - JPL Fax: (909) 396-1455 Sampled By: Marco Mendoza, Jason Estep 2/15/05 Date: Weather: partly cloudy and cool PURGE VOLUME CALCULATION (casing volume): Gallons TD (feet) WL (feet) D (inches) Calculated Purge Volume PURGE METHOD PUMP INTAKE SETTING Bailer - Type: X Pump - Type: 2" Grundfos Depth in feet (BTOC): FIELD PARAMETER MEASUREMENT Depth to Total Dissolved Time Water Discharge рΗ Conductivity Turbidity Oxygen Temp ORP Comments (Feet) (NTU) (Gallons) (mS/cm) (mg/L) (° C) (mV) 1233 101.40 \bigcirc 7.34 42.9 7.87 8.6 17.7 134 1248 41 7.24 43.0 2.46 8.3 17.7 101 1303 2.99 81 7.29 43.3 9.8 97 17.9 1.22 13 18 7.3843.1 1.95 8.7 17.5 102 162 430 1333 7.52 0.89 8.6 17.4 100 101.40 1348 202 7.44 43.1 0.67 8.5 17.3 115 Total Purge Volume: (Gallons) 202 Total Discharge: 3.01 (Casing Volumes) 2.75 Approx. Purge Rate: (GPM) OBSERVATIONS DURING PUMPING NOTES: (well condition, color, clarity, odor): Purge start at 1239 Purge time start: 1233 **RECHARGE BEHAVIOR:** X Fast recharging □ Slow recharging (80% recharge did not occur after two hours) **WATER DISPOSAL** Purge water storage: Purge water disposal: WELL SAMPLING Sample Depth in feet (BTOC): __ **Original** MS/MSD <u>Blank</u> Other (Trip / Source /) Sample ID: MW- 8 Sample ID: DUPE- 6 - 1405 Type: Type: Sample Time: /352 Sample Time: Sample ID: ____ Sample ID: ___ No. of Containers: 5 + 1 (9324)No. of Containers: Sample Time: _____ Sample Time: ____ No. of Containers: _____ No. of Containers: _____

GROUNDWATER COLLECTION AND SAMPLE LOG WELL ID #_____10___



Project Name: Quarterly Monitoring at JPL, Pasadena, CA. 22632 Golden Springs Dr., Suite 270 4-73803 Project No: Diamond Bar, CA 91765 Telephone: (909) 396-7662 Navy Contract No.: BATIELLE - JPL # 6486048 Fax: (909) 396-1455 Sampled By: Marco Mendoza, Jason Estep 2/16/05 Date: Weather: partly cloudy and cool PURGE VOLUME CALCULATION (casing volume): 200.03 Gallons D (inches) TD (feet) WL (feet) # Vols Calculated Purge Volume PURGE METHOD PUMP INTAKE SETTING X Pump - Type: 2" Grundfos ☐ Bailer - Type: Depth in feet (BTOC): FIELD PARAMETER MEASUREMENT Depth to Total Dissolved Time Water Discharge Conductivity Turbidity ORP Oxygen Temp Comments (Feet) (Gallons) (mS/cm) (NTU) (mg/L) (° C) (mV) 730 52.86 0 5.21 . /38 12.5 8.7 272 17.5 741 40 5.88 4.15 141 8.1 17.7 234 753 6.45 80 .141 1.13 8.5 17.7 311 65L 804 120 .142 8.4 1.27 17.8 204 816 160 6.68 1141 1.26 8.1 18.0 201 52.86 827 0.85 200 6.87 .143 8.1 17.6 201 Total Purge Volume: (Gallons) 200 Total Discharge: 300 (Casing Volumes) Approx. Purge Rate: 3.5 (GPM) CESERVATIONS DURING PUMPING NOTES: (well condition, color, clarity, odor): Purge start at 725 Purge time start: 735 **RECHARGE BEHAVIOR:** X Fast recharging Slow recharging (80% recharge did not occur after two hours) WATER DISPOSAL Purge water storage: polytank Purge water disposal: WELL SAMPLING Sample Depth in feet (BTOC): _ Original MS/MSD <u>Blank</u> Other (Trip / Source /) Sample ID: __MW-10 Sample ID: Type: _ Туре: _____ Sample Time: 830 Sample Time: Sample ID: _ Sample ID: _____ No. of Containers: 5 No. of Containers:___ _ Sample Time: _____ Sample Time: _____ No. of Containers: ______ No. of Containers: _____

GROUNDWATER COLLECTION AND SAMPLE LOG WELL ID #_____13___



Project Name: Quarterly Monitoring at JPL, Pasadena, CA. 22632 Golden Springs Dr., Suite 270 Project No: 4-73803 Diamond Bar, CA 91765 Telephone: (909) 396-7662 Navy Contract No.: BATTELLE - DPL #G486048 Fax: (909) 396-1455 Sampled By: Marco Mendoza, Jason Estep 2/15/05 Date: Weather: partly cloudy and cool PURGE VOLUME CALCULATION (casing volume): Gallons TD (feet) D (inches) WL (feet) Calculated Purge Volume PUMP INTAKE SETTING Bailer - Type: __ X Pump - Type: 2" Grundfos Depth in feet (BTOC): FIELD PARAMETER MEASUREMENT Depth to Total Dissolved Time Water Conductivity Discharge Turbidity Oxygen ORP Temp Comments (Feet) (Gallons) (mS/cm) (NTU) (mg/L) (° C) (mV) 1046 147.87 0 7.26 46.7 19.6 221 .103 8.7 1100 34 7.30 9.41 ,102 8.6 20.7 209 1113 68 7.33 102 4.23 9.3 203 209 1127 102 7.34 95 101 9.2 20.8 221 1140 136 7.38 1.70 ,/აა 8.4 22.0 216 1154 147.87 170 1,04 7.21 .101 9.3 21.1 207 Total Purge Volume: (Gallons) 170 **Total Discharge:** 3.01 (Casing Volumes) 2.5 Approx. Purge Rate: (GPM) OBSERVATIONS DURING PUMPING NOTES: (well condition, color, clarity, odor): Purge start at 1042 Purge time start: 1046 **RECHARGE BEHAVIOR:** X Fast recharging □ Slow recharging (80% recharge did not occur after two hours) WATER DISPOSAL Purge water storage: polytank Purge water disposal: WELL SAMPLING Sample Depth in feet (BTOC): _ **Original** MS/MSD Blank Other (Trip / Source /) Sample ID: ___ MW- 13 Sample ID: __ Type: ___ Туре: _____ Sample Time: _____ 1156 Sample Time: ___ Sample ID: Sample ID:

No. of Containers: ______ No. of Containers: ______
ORIGINAL FIELD RECORD

Sample Time:

Sample Time:

No. of Containers:___

No. of Containers: ____5

GROUNDWATER COLLECTION AND SAMPLE LOG WELL ID #_____15____



Project Name: Quarterly Monitoring at JPL, Pasadena, CA. 22632 Golden Springs Dr., Suite 270 4-73803 Project No: Diamond Bar, CA 91765 Telephone: (909) 396-7662 #G486048 BATTELLE - JPL Navy Contract No.: _ Fax: (909) 396-1455 Sampled By: Marco Mendoza, Jason Estep 2/11/05 Date: Weather: partly cloudy and cool PURGE VOLUME CALCULATION (casing volume): X 0.0408 =Gallons TD (feet) WL (feet) D (inches) Calculated Purge Volume PURGE METHOD PUMP INTAKE SETTING Bailer – Type: __ X Pump – Type: 2" Grundfos Depth in feet (BTOC): FIELD PARAMETER MEASUREMENT Depth to Total Dissolved Time Water Discharge Conductivity Turbidity ORP Oxygen Temp Comments (Feet) (Gallons) (mS/cm) (NTU) (mg/L) (° C) (mV) 805 O 28.45 5.00 2.84 8.3 081 17.1 275 812 18 5.64 ,091 2.70 8.7 17.4 248 819 35 44.9 6.08 3.94 8.2 17.7 115 826 53 6.31 45.1 2.41 8.4 17.2 103 833 70 6.42 292 45.1 7.9 17.4 97 840 88 6.70 45.1 1.70 8.8 99 17.7 841 28.45 89 45.1 6.80 1.21 8.3 17.4 100 Total Purge Volume: (Gallons) 89 Total Discharge: 3.00 (Casing Volumes) 25 Approx. Purge Rate: (GPM) OBSERVATIONS DURING PUMPING NOTES: (well condition, color, clarity, odor): Purge start at 805 Purge time start: 805 **RECHARGE BEHAVIOR:** X Fast recharging □ Slow recharging (80% recharge did not occur after two hours) WATER DISPOSAL Purge water storage: polytank Purge water disposal: WELL SAMPLING Sample Depth in feet (BTOC): _ **Original** MS/MSD Blank Other (Trip / Source /) Sample ID: __ ___ MW- 15 Sample ID: Type: _ Туре: _____ Sample Time: 844 Sample Time: __ Sample ID: Sample ID: No. of Containers: ______ No. of Containers: _ Sample Time: ____ Sample Time: _____ No. of Containers: _____ No. of Containers: ____

GROUNDWATER COLLECTION AND SAMPLE LOG WELL ID #_____16



Project Name: Quarterly Monitoring at JPL, Pasadena, CA. 22632 Golden Springs Dr., Suite 270 Project No: 4-73803 Diamond Bar, CA 91765 Telephone: (909) 396-7662 Navy Contract No.: BATIELLE - JPL # G486048 Fax: (909) 396-1455 Sampled By: Marco Mendoza, Jason Estep 2/16/05 Date: Weather: partly cloudy and cool PURGE VOLUME CALCULATION (casing volume): Gallons TD (feet) WL (feet) D (inches) Calculated Purge Volume PURGE METHOD PUMP INTAKE SETTING ☐ Bailer – Type: X Pump - Type: 2" Grundfos Depth in feet (BTOC): FIELD PARAMETER MEASUREMENT Depth to Total Dissolved Time Water Discharge Conductivity **Turbidity** Oxygen ORP Temp Comments (Feet) (Gallons) (mS/cm) (NTU) (mg/L) (° C) (mV) 1147 200.66 7.10 2.62 1092 10.4 22.8 マリそ 1204 7.64 35.3 .091 9.5 22,5 240 Hao Brownish 7.65 1220 66 9,12 .091 239 10.1 aa.5 1237 99 7.65 3.67 .092 22.1 234 9.7 1253 132 7,63 .092 1,60 22 233 1310 200.66 165 7.69 .092 1.23 89 22.6 258 Total Purge Volume: (Gallons) 165 Total Discharge: 3.00 (Casing Volumes) Approx. Purge Rate: 2 (GPM) OBSERVATIONS DURING PUMPING NOTES: (well condition, color, clarity, odor): Purge start at 1145 Purge time start: 1147 **RECHARGE BEHAVIOR:** X Fast recharging □ Slow recharging (80% recharge did not occur after two hours) WATER-DISPOSAL Purge water storage: polytank Purge water disposal: Sample Depth in feet (BTOC): _ **Original** MS/MSD Blank Other (Trip / Source / Sample ID: MW- 16 Sample ID: <u>DUPE - 7 - 1 Q05</u> Type: ___ Type: Sample Time: ___ ___ Sample ID: _____ Sample ID: _____ No. of Containers: 5 No. of Containers:____ Sample Time: _____ Sample Time: ____

No. of Containers: ______ No. of Containers: _____
ORIGINAL FIELD RECORD



Multi-Port Well Field Data Sheet

JPL Pasadena Contract #:

Well ID: MW-24

Sampling Zone No.: 4+31

Start Time: 859 Finish Time: 1100

Beginning of Session: 14.06 psic

Depth (ft): \$554, 435, 373, 279

End of Session: 14.05 Water Pressure Inside Casing: -

				Surface	Function Cl	hecks			Position Sampler				Samp	le Colle	ction Chec	ks				Water	Quality	Paramet	ers
Port #	Run #	Shoe Out	Vacuum Check Valve Closed		Evacuate Container		Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
4	ĺ	V		-		. :-	-	س		/	144.31	/	177.42		177.43			14434		5.65		19.5	34.2
3	1	/	1			س			~	/	92.71	1/	122.37		127.37	<u></u>		92.70				20.2	38.4
12	1	~								<u> </u>	65.80		100.83		100.83		'	65.81			5.0	19.8	
H	-	~	<u></u>	٠	'رن		· ~	-		<i>\</i>	25,20	<u> </u>	61.57	/	61.57		V	25.19	<i>1042</i>	6.32	2.0	20.0	54.2
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																					_		

Notes:		Total Volume:
port 5: NOT SAMPLED	port 4: No object cause port 3: CLEAR in / Has object	
port 2: CHEAR NO ODOK	port 1: CLEAR W/ SLIGHT ODOF	



Multi-Port Well Field Data Sheet

JPL Pasadena Contract #:

Well ID: <u>MW-21</u>

Sampling Zone No.: 5+0/

Start Time: 0709 Finish Time: /025

Water Pressure Inside Casing: -----

Beginning of Session: 14.08 psis

Depth (ft): 372, 310, 240, 161, 90

End of Session: 14.76

					Function C	hecks			Position Sampler				Samp	le Colle	ection Chec	:ks			-	Water	Quality	Paramet	ers
Port #	Run #	Shoe Out	Vacuum Check Valve Closed	Valve	Evacuate Container			Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
5	L	V	~					_	\		129.42	V	162.28	~	16230	V	~	129.44	747	4.83	2.7	14.0	1.05
4-	+	-	-				-				100.22		125.05							ļ			
4	1	1	\	-	<i></i>			-	レ		102.43	V	135.45		/35.45	•	1	102.47	834,	5.63	1.8	14.8	.98
4	2	<i></i>	_	\)		102.37	~	135.46	/	135.45	V		102.42	900	5.95	18	15.7	.97
3	1		/	1	\ \		/)	~	72.31		105.61	/	105.60	V		72.34			2.3	16.2	1.35
2	ł	/	\	\	/	\	/	1	1		37.79		71.45		71.43			37. 80				16.9	1.49
1	1	1	/	/	\	\	/	1			14.16	/	40.17		40.16	~		14.25					1.37
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		<u> </u>											_			-							
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		T .							<u> </u>														

Notes: port 5: CUENC, NO OPOR	port 4: CLEAR, NO ODOR port 3: CLEAR, NO ODOR	Total Volume:
port 2: CLEAR NO ODOR	port 1: CLEAR SLIGHT ODSIL	



Multi-Port Well Field Data Sheet

JPL Pasadena						
Contract #:	•	**	•			

Well ID: MW-14

Sampling Zone No.: 5/5/ Depth (ft): 540, 456, 382, 277, 8 207

Start Time: 0732 Finish Time: 1049 Page: 1 of 1

Beginning of Session: 14.07 ps/4

Water Pressure Inside Casing: End of Session: 14.57

			,	Surface	Function C	hecks			Position Sampler	-			Samp	le Colle	ection Chec	ks				Water	Quality	Paramete	ers
Port #	Run #	Shoe Out	Vacuum Check Valve Closed		Evacuate Container			Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	₽H	Turb. (NTU)	Temp. (oC)	Cond (mmhos
5	L	~					_	/		~	19.31°	1	188.34	~	188.32	/	/	192.33	808	5.28	5. O	15.9	31.8
								-		_	156.05	,											<u> </u>
4	- 1	<i>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>			اس						155.19		151.86		151.85	/	<u></u>	155.19				17.6	56.0
3	/_	1								/	123. 41	/	119.76	1	119.75	V		123.43		6.11	1.4	18.1	./20
3	2						_				123.39	<i>'</i>	119.77	<u> </u>	119.75	~	1	123.38		6.49	1.9	18.B	.121
2	!-	/	<u> </u>								77.51		71.96	<u> </u>	73.96			77.54		,	3.1	19.4	.129
	- (<i></i>				1//			47.45	<u> </u>	45.02		43.01	/	1/	47.46	1032	7.05	5.6	20.5	-139
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Notes:	Total Volume:
port 5: CLEAR SLIGHT ILS ODOR port 4: CLEAR SLIGHT DOWN port 3: CLEAR NO ODOR	·
	
port 2: CLEAR, SLICHT FISHY OPON PORT 1: CLEAR, NO SPOR	

>3



Multi-Port Well Field Data Sheet

JPL Pasadena

Contract #:

Well ID: MW-3

Sampling Zone No.: 43.2

Depth (ft): \$55,558,346,252,172

Start Time: 1145
Finish Time: 1370

Date: 1/3/1/05

Water Pressure Inside Casing: -----

Beginning of Session: 14.11 pour End of Session: 14.08 pour

				Surface	Function Ci	hecks			Position Sampler				Samp	ele Colle	ection Chec	ks				Water	Quality	Paramete	ers
Port #	Run #	Shoe Out	Vacuum Check Valve Closed		Evacuate Container		Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
4	1/	/	/	\			/		V.		210.83	1	219.56		219.55	~		210.75	1216	7.48	2.2	22.1	41.7
3	1	V		/			/			V	118.53		131.00	1	131.00	/	1	118.51				20.5	44.6
2		~	~	1	V		V	\	V	/	78.13	/	90.25	/	90.25	/	1/	78.13				21.0	49.5
2	2	V	/	_			/			V	77.11	1	90.24		90.25	/	1	77.13	1323	7.82	2.3	19.2	49.1
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Notes:		Total Volume:
port 5: NOT SAMPLED	port 4: CUEAR, NO ODOR PORT 3: NO ODOR, CLIPAR	
port 2: CLEAR NO ODOK	port 1: NOT SAMPLES	



Multi-Port Well Field Data Sheet

Contract #:

Well ID: MW-19
Sampling Zone No.: 5+, /
Depth (ft): 498, 444, 392, 314, & 242

Start Time: 929
Finish Time: 1155

Page: 1 of 1

Beginning of Session: 14.14

End of Session: 14.09 Water Pressure Inside Casing: ------

			5	Surface	Function Cl	hecks			Position Sampler				Samp	le Colle	ction Chec	ks				Water	Quality	Paramete	ers
Port #	Run #	Shoe Out	Vacuum Check Valve Closed		Evacuate Container			Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos
۲۸	.1	/	/	/	~ ·	-	سد		سن	-	147.07	/	173.24	/	173.24	/	1	147.10	955	5.06	_//.	17.2	63.6
4	1	'		1		<u></u>	/	<i>•</i>		/	123.62	/	149.85	/	149.84		1	123.63				18.1	75.4
3	1	1		V		<u> </u>	/	-		1	101.47	/	127.86		127.87		1	101.45				19.5	77.3
27	1								-	-	67.13	<i>'</i>	93.74		93.74	<u> </u>		67.13				19.8	. 130
1	1					<u> </u>	<i></i>				35.81	1/	63.72		63.71	1	1	35.81	1146	7.21	30	20,4	49.3
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Notes:	Total Volume:
port 5: CLEAR, NO ODOR port 4: CHEAR, NO DOR port 3: CLEAR, NO ODOR	
port 2: SUCHT YELLOW BYLLING ON ODOR port 1: SLICHTLY VIZINIAISK BROWN, NO DOR	



Multi-Port Well Field Data Sheet

JPL Pasadena Contract #:

Well ID: MW-17

Sampling Zone No.: 4+2

Depth (ft): 726, 582, 468, 370, 250

Start Time: 723 Finish Time: C120 Date: 2/2/05 Page: 1 of 1

Beginning of Session: /4, // Water Pressure Inside Casing: ---

End of Session: 14.07

			5	Surface	Function Cl	necks			Position Sampler				Samp	le Colle	ction Chec	ks				Water	Quality	Paramete	ers]
Port #	Run #	Shoe Out	Vacuum Check Valve Closed		Evacuate Container			Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve		Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)	
4	l	~	/				س	✓	/		107.56	/	186.55	/	186.52	/	1/	107.55	747	5.42	1.7	13.9	31.9	1
3	t	V	/				/	<u>.</u>	. /	~	57.86	1	134.10	/	134.10	/		57.85				14.2	67.1	
2	1	<u>''</u>		/		-					14.97	/	96.86	/	96.84		/	15.04	853	5.87	2.7	14.8	82.4] >=
2	2	~	_					_	<u> </u>	/	14.96	V	96.85	_	96.84		/	15.03						<u> </u>
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Notes:		Total Volume:
port 5: NOT SAMPLES	port 4: CLEAR SLICHT OPOR port 3: CLEAR, SLICHT HIS DOOR	 _
port 2: CLEAR, MODOL	port 1: NOT SAMPLED	



Water Pressure Inside Casing: -----

Groundwater Sampling

Multi-Port Well Field Data Sheet

JPL F	Pasadena
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Well ID: MW-18

Contract #:

Sampling Zone No.: 5+0 2

Depth (ft): 684, 564, 424, 330, 259

Beginning of Session:

14.09 End of Session: 14.06

Start Time: 1024 Finish Time: 1257

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				Surface	Function C	hecks			Position Sampler				Samp	le Colle	ection Chec	ks				Water	Quality	Paramet	ers
Port #	Run #	Shoe Out	Vacuum Check Valve Closed		Evacuate Container		Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe (n	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
7	ı	~				/			'	V	159.51	/	213.29		213.26	\	1/	159.52	1057	7.04	2.4	19.8	29.3
4	1	<u>/</u>		/						1	107.76	1	162.34	1/	162.35	1	/	107.77					43.1
3	l	~	سا	_		سب	ست	~	·/	w/	46.71	/	105.68	'	105.69	/	1	46.74	1159	7.19	2.8	20.7	55.9
2	1	<i>'</i>					<u>''</u>	س		<i>i</i>	14.21	/	62.85	1/	62.84	1/	1	14.29			2.4	20.8	50.6
2	2	/									14.18	/	62.85	/	62.85	~	_	14.29	1249	7.21	25	20.9	54.8
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							-													<u> </u>		<u> </u>	<u> </u>
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Notes:		Total Volume:
port 5: CLEAR NO SOUR	port 4: CLEAR, NO ODOR port 3: CLEAR, NO OROK	
port 2: CLEAR NO ODOR	port 1: NOT SAMPLES	



Multi-Port Well Field Data Sheet

JPL Pasadena Contract #:

Well ID: MW-20

Sampling Zone No.: 5/5/

Depth (ft): 900, 700, 562, 392, 230

Start Time: 720 Finish Time: 1010

Beginning of Session: 14.09 psig

Water Pressure Inside Casing: -End of Session: 14.07

			8	Surface	Function C	hecks			Position Sampler				Samp	le Colle	ection Chec	ks				Water	Quality	Paramet	ers
Port #	Run #	Shoe Out	Vacuum Check Valve Closed		Evacuate Container		Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp.	Cond (mmhos)
5		/				/				/	309-16		330.89		330.89	V	/	309.15	756	5.08	3.5	14.0	37.3
ч											222.10	/	244.47	/	244.45	/	1		831		9.3	15.9	31.9
3	1	1				<i></i>	/	1			162.0	_/_	/83.74	/	183.75	/	1	162.02			1.2	17.7	51.7
2	1	V		V	/	/			رس ا	<u>//</u>	87.94	/	109.00	<i>'</i>	/00y./	مرا	1/	87.95			1.2	18.2	38.9
-	-1	~					/	س		<u> </u>	17.66	1/	37.39	/	37.41	V	·/	17.72	1004	6.48	4.2	18.4	47.1
					;			, , ,															
												-											<u> </u>
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Notes:		Total Volume:
port 5: CLEAR, STRUG DOWN	port 4: CLFM 4,5 DDON port 3: CLEM STRONG DON	
		-
port 2: CHEAR SHENT SPIR	port 1: CLEAR MODER	-



Groundwater Sampling Multi-Port Well Field Data Sheet

JPL Pasadena

Contract #:

Well ID: MW-25

Sampling Zone No.: 5+1

Depth (ft): 713,633,503,423,358

Start Time: 756 Finish Time: 1645

Page: 1 of

Beginning of Session: Water Pressure Inside Casing: ---

End of Session: 14.08

			5	Surface	Function C	hecks			Position Sampler				Samp	le Colle	ection Chec	ks				Water	Quality	Paramet	ers
Port #		Shoe Out	Vacuum Check Valve Closed		Evacuate Container		Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
5	l	1		-		-	\		\	V	204.71	~	201.77		201.79		~	204.77	835	5.50	24	16.4	47.7
5	2	_	_/_								205.14		201.71		201.76	سا	1	205.15	908				
5	3	<u>'/</u>									205.12	/	201.77	1	201.76	<u></u>	/	205.15	937				
5	4	<u> </u>	~	/			/			~	203.61	1	201.76	1/	201.76	~	~	203.60	1001	6.66	3.1	17.6	47.9
4	l				/					<u></u>	171.03	/	168.0a	<u>/_</u>	168.02		/	171.61	/043	6.64	3.6		66.0
7	2	~		~							170.96	~	168.01		168.01		<u> </u>	170,95	1113				
4	3				- W	1/					170.93		168.01	/	168.00	V	/	170.95	1143	6.99	3.4	17.5	65.5
3	1	1/								_	114.55	1	112.75	1/	112.73		1/	114.58	1225	7.22	5.0	18:8	59.6
3	2										114.50	/	112.73	1/	117.70	V		114.51					
3	3	V		/				~		/	114,91	~	112.72		112.70		1	114.9)	130	7.52	4.6	18.3	62.3
2	L	L/	<u> </u>	1		~	ر ا		V	<u>/</u>	80,08	<u>/</u>	78.22	/	78.20	V	1/	80.04	12/06	7.85	15	16.8	
2	2	/		1					V	~	79.56	<u>/</u>	78.23	ربر	78.22	/	/	7957	940				
2	3	/	/	/	/					/	79.53		78.23	/	78.20	س	/	79.52	3				
	1		1/_	-/				~	~	_/	51.13	~	49.66	<u> </u>	49.66	i/	<u></u>	51.15	1347	7.83	2.3	16.2	825
1	a	/		/	/.	/	1	V	· /	/	50.99	/	49.66		49.66	1	1		1617				
	3		_								51.44	1	49.67		49.66	1	/	51.46	1647				
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Notes:		Total Volume:
PORTS: CYCAR SLIGHT ODOR	port 4: CLEAR, SUCHTODOPE port 3: CLEAR, NO ODER	
port 2: CLEAR, NO OFFIR	port 1: CLIFAR, NO SPOR	



Multi-Port Well Field Data Sheet

JPL P	asadena
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Contract #:

Well ID: MW-11

Sampling Zone No.: L/ +> /

Depth (ft): 639,524,429,259,149

Start Time: 717
Finish Time: 940

Date: 2/8/05 Page: 1 of 1

Water Pressure Inside Casing: -----

Beginning of Session: 14.08 psic

			;	Surface	Function C	hecks			Position Sampler				Samp	le Colle	ection Chec	ks		***		Water	Quality	Paramete	ers
Port #	Run #	Shoe Out	Vacuum Check Valve Closed		Evacuate Container		Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
4	t										195.42	/	193.16	1	193.72		1	195.43	143	5.24	1.72	14.1	26.2
3	ţ		1	1		/	/	/	V	_/	154.46	V	152.22		152.14	/		154.45					
2	1	<u> </u>	/								80.74	/	80.81	<i>i</i> /	80.77	V					1.42		44.4
.├─		1		1	س	<i></i>		~			33.80	/	39.25		39.23	<u> </u>	/	33.81				16.4	54.7
<u>'</u>	12	/		/			_	/		V	33.25	✓	39. 23		39.23	~	/	33.27	934	6.59	2.02	18.0	54.5
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Notes:				Total Volume:	
port 5: M SAMPLE	port 4:	CLEAR, Has ODOR	port 3: CLEAR SLIGHT ODSIZ	_	-
port 2: CLAR, SLIGHT DOOR	port 1:	CLEAR, NO ODOR			



Multi-Port Well Field Data Sheet

Contract #:

Well ID: MW-4

Sampling Zone No.: 3 + s [
Depth (ft): 548,392,322,240,150

Start Time: 1017
Finish Time: 122

Date: 2 (8/05 Page: 1 of 1

Beginning of Session:

14.04 psia

Water Pressure Inside Casing: _----

End of Session: 14.07 1514

				Surface	Function C	hecks		Position Sampler				Samp	le Colle	ection Chec	ks		_	-	Water	Quality	Paramet	ers
Port #	Run #	Shoe Out	Vacuum Check Valve Closed		Evacuate Container		Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve			Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
3	_			/			\		1	58.61	1/	129.63		/29.63	~	1	58.67	1046	6.76	19.4	22.4	40.0
2_	1	1								22.83	V	94.61	<u></u>	94.61	/		22.85					97.0
ъ	2	/							V	22.80	1	94.60	<u>/</u>	94.61	V	/	22.89	1130	7.06	5.45	20.1	97.1
l_	{						 _	√		14.16	V	59.84	/	59.83	1/	/	14.22	1215	7.42	23.3	19.8	45.2
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Notes:			Total Volume:
port 5: NOT SAMPLED	port 4: NOT SAMPLES	port 3: VELLOWISH-BROWN, NO ODER	
port 2: CLEAR NO STOR			
BOILE. CLERK NO STONE	port 1: Clear NO 030n		



Multi-Port Well Field Data Sheet

Depth (ft): 445, 319, 254, 174

JPL Pasaden	ì
Contract #:	

Well ID: MW-23

Sampling Zone No.: 4 +21

Start Time: 726 Finish Time: 0940 Date: 2/9/05 Page: 1 of 1

Beginning of Session:

14.09 osia

Water Pressure Inside Casing: --End of Session:

				Surface	Function Cl	necks			Position Sampler				Samp	le Colle	ection Chec	. Sample Collection Checks						Water Quality Parameters					
Port #	Run #	Shoe Out	Vacuum Check Valve Closed		Evacuate Container			Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)	-)			
Ч	1	/	/	\		/					165.53	/	171.86	1/	171.85	~		165.54	% 00	531	7.00	1/ 2	38.7	1			
3	[/		/		/		V	/	\	110.91		118.79		118.79	V	1	110.91	824	6 26			37.7	1			
2		1	/		/	/		/	_	/	82.69	V	90.77		90.76			82.68					93.0	1			
2	2	V	<i>V</i>	/	/	/	<i>\\</i>			V	82.66	V	90.76	1/	90.77	V	1	82.64	907	7.02	1.31	15.4	92.8	>			
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Notes:	Total Volume:
port 5: NOT SAMPLED port 4: CLEAR, STRONG ODER port 3: CLEAR STRONG ODER	
port 2: CLEAR, STRONG DON'T PORT 1: CLEAR STRONG DOOR	



Groundwater Sampling Multi-Port Well Field Data Sheet

Depth (ft): 588; 467, 389, 329, 245

JPL Pasadena
Contract #:

Well ID: MW-22

Sampling Zone No.: 3+5 (

Start Time: 7/3
Finish Time: 900

Date: 2/13/05

Beginning of Session:

14.00 psia

				Surface	Function Cl	hecks	_		Position Sampler				Samp	ie Colle	ection Chec	ks				Water	Quality	Paramet	ers
⊃ort #	Run #	Shoe Out	Vacuum Check Valve Closed	Valve Open	Evacuate Container	Valve Closed	Shoe in	Arm lπ	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp. (oC)	Cond (mmhos)
3	l	V	/	/			/	\	\	/	115.26	/	120.66		120.64	1	7	115.26	738	E 12	000	1/ 5	506
2	1	V	1/	1	/	\		~	1		89.22	i/	94.65		94.64	1/		89.21	720 509	5-71	0.77	16.7	.096
2	2	V	/		V	\	1	1	/		89.19	1	94.65	/	94.65			89.19	819	610	1.25	170.8	.042
	1		/		1		1	/		/	52.49	1/	58.27		58.27	1	/	52.44	8/5-7	14.	155	10.5	
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Notes: port 5: NOT SAMPLES	port 4: NOT SAMPLED port 3: CHAR, STRING SOUR	Total Volume:
port 2: CLEAR, AD ODSIL	port 1: SLIGHTLY BROWN STRONG STOR	



Multi-Port Well Field Data Sheet

JPL Pasadena Contract #:

Well ID: MW-12

Sampling Zone No.: 5to!

Depth (ft): 548, 436, 323, 243, 140

Start Time: 939 Finish Time: 1240

Water Pressure Inside Casing: ---

Beginning of Session: 14.07 psia

End of Session: 14.03 psia

				Surface	Function C	hecks			Position Sampler				Samp	ole Colle	ection Chec	ks				Water Quality Parameters					
Port #	Run #	Shoe Out	Vacuum Check Valve Closed		Evacuate Container		Shoe in	Arm In	Deactivate Set Arm Locate Port	Arm out	Pressure in MP	Shoe Out	Zone Pressure	Open Valve	Zone Pressure	Close Valve	Shoe In	Pressure in MP	Time	PH	Turb. (NTU)	Temp.	Cond (mmhos		
5	1					~	/				201.45	V	215.51	1	215.50	1/	7	201.45	long	7 21	3.21	170	42.7		
7	1	/	V.	/		سن		-	/	1	153.64		170.22		170.13		17	153.62					46.3		
3	-	/		/					/		103.89		122.26		122.26		1/	103.88			1.95		39.0		
3	2	/	/						/		103.90	<u> </u>	122.26	V	122.26	1	1	103.84			201	20.14	37.0		
2		~	/	/		1	/				68.87	V	88. 27	V	88.26		1/	68.89	205	792	2.68	20.9			
L	1	V			/	1			/		24.36	1	48.85	1	48.84	V		24.36				20.8			
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Notes: port 5: CLEAR, NO OZOR	port 4: CURAL, NO STOR	port 3: CUZA, NO ODOR	Total Volume:
port 2: CUEM, WODON	port 1: CUM, NOOSA		

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